The above and other features and advantages of the present invention will become more apparent by describing in detail preferred embodiments thereof with reference to the attached drawings in which:

FIG. 1 is a cross-sectional view of a test element group (TEG) pattern region of a semiconductor device according to embodiments of the present invention;

FIG. 2 is a graph showing effects of the present invention compared with those of the conventional method;

FIG. 3 is a cross-sectional view of a semiconductor device according to embodiments of the present invention; and

FIG. 4 is a cross-sectional view of a semiconductor device according to further embodiments of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

The present invention will now be described more fully with reference to the accompanying drawings, in which preferred embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as being limited to the embodiments set forth herein. Rather, these embodiments are provided so that this disclosure is thorough and complete and fully conveys the concept of the invention to those skilled in the art. In the drawings, the shape and/or size of elements is exaggerated for clarity. Further, it will be understood that when a layer is referred to as being "on" another layer or substrate, it can be directly on the other layer or substrate, or intervening layers may also be present.

FIG. 1 is a cross-sectional view of a test element group (TEG) pattern region of a semiconductor device according to the present invention. Referring to **FIG. 1**, a diffusion layer **110** of a first impurity type (*e.g.*, an n-type diffusion layer) is formed in the TEG region of a semiconductor substrate **100** of a second impurity type (*e.g.*, a p-type semiconductor substrate). Next, an inter-layer dielectric (ILD) **120** is formed on the semiconductor substrate **100**. The ILD **120** may, for example, be an oxide-based layer. The ILD **120** is patterned to form a contact hole, which exposes a portion of the diffusion layer **110** of the ~~second~~ first impurity type. Contact plugs **130** are formed in the contact hole using a doped polysilicon. As illustrated in **FIG. 1**, one contact plug is formed according to embodiments of the present invention, while the other contact plug is formed according to a conventional method.

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